AMERICAN DYESTUFF REPORTER

A Weekly Publication devoted to DYESTUFFS, COLORS and ALLIED CHEMICALS

"Circulated Everywhere Dyestuffs are Used"

Vol. 2 New York, June 24, 1918 No. 21

RECEIVED JUN 26 1918 LIBRARY OF THE BARRETT CO.

No Dyes Absolutely Fast to Light

Dyeing of Women's Dress Goods

DISCUSSED BY DR. LOUIS J. MATOS

THE question of fastness to light of the dyes used in women's dress goods was recently discussed by Dr. Louis J. Matos, of the National Aniline & Chemical Co., Inc., in an interview appearing in *Women's Wear*.

According to Dr. Matos no dyes have ever been produced which were absolutely fast to light and weather. Fastness is purely a relative term, and although many colors are available which will, so far as the eye can distinguish, outlast the fabrics themselves, there is, nevertheless, an invisible weakening of the color.

Speaking of the dyeing of dress fabrics and the colors available for this purpose, Dr Matos said:

Women's dress goods are made of two classes of fabrics. The most important and better quality are made from worsted yarns containing no admixture of either cotton or shoddy. The cheaper grades are made of worsted yarns that may contain either a variable quantity of cotton spun with the wool or they may be woven from worsted yarns and cotton yarns. In either case the fabrics may be regarded as being union goods.

Prior to the outbreak of the war, manufacturers of women's dress goods produced a wide range of shades divided principally into three groups:

First—Blacks of which there are a number of hues.

Second—Blues, from the deep blue black, through navies and lighter tones.

Third—Mode shades, or so-called fashionable shades, which comprise a variety of hues or tints manufactured to meet the whims of fashion.

The blacks and blues are usually regarded by manufacturers or jobbers of women's wear as staples. The mode shades are generally manufactured in quantities sufficient to meet the orders passed to the mills from the jobbers, to fill the requirements of the dressmakers and dress goods establishments in closest touch with the buying public who know better than any other class of dealer how the fashionable shades run.

FEW FAST TO LIGHT

As a general rule the dyes most commonly used prior to the war for the all-wool dress goods—that is, those of the better class and higher grades—were the level dyeing acid colors, a rather extensive range which in the hands of the dyer are capable of pro-

FOR FORTY-SIX YEARS

Headquarters in Chemicals, Colors, Dyestuffs, Gums, Oils and Softeners

for the

Textile and Allied Trades

Sole American Agents for

The Society of Chemical Industry

in Basle, Switzerland

Manufacturers of Basic, Direct, Acid, Pyrogen, "Ciba" and "Cibanone" Colors

Sole Selling Agents and Distributors for the products made by

BULLS FERRY CHEMICAL COMPANY

Edgewater, N. J.

and

E. C. KLIPSTEIN & SONS COMPANY

Custer City, Pa. Chrome, N. J.

South Charleston, W. Va.

Manufacturers of

SULPHUR DYES

BLACK BLUES KHAKI BROWN

YELLOW VAT BLUES

Specialty—Zeta Black for Hosiery

Indigo Extract, Indigotine, Soluble Oils, Chrome Acetate, Sulphate of Chrome, Chrome Chloride

Correspondence invited

A. KLIPSTEIN & COMPANY

644-652 GREENWICH STREET NEW YORK CITY

ducing every possible shade and hue. Of all the dyes available for this work there are few that possess the property of extreme fastness to light, which after all is the requirement now most insistently made. The number of level dyeing acid colors formerly foreign made possessing this particular quality may possibly number one-half dozen, not including black. With this small number the dyer is able to produce many combinations of great utility.

At the present time two of these important and much desired dyes have not been produced in this country—a blue and a violet are of importance as toning or shading colors for a wide variety of browns, tans taupes, etc. Take, for example, these several important shades shown in the 1917 and 1918 cards of the Textile Color Card Association: Chinchilla, mole, moleskin, beaverfelt, all shades belonging to one family and ranging from browns to grays; also the fashionable shades known as cub, bear, and rodent. These are all compound shades in which blue and violet are important components, as are also the two widely used and important shades, beaver and taupe.

It is necessary, however, that colors used in compounds should possess the same general properties, consequently the absence of this blue and violet possessing the same degree of fastness as the other colors now available occasions an embarrassment.

The reason for the inability of the dyemaker to produce these two colors is that some of the raw materials or so-called intermediates necessary for their production have not been developed. It is, however, only a question of time until these two most desired dyes will be available to the American dyer. The National Aniline and Chemical Co., Inc., is applying its great resources to their production, and it is to be expected that the near future will have something of interest in this direction.

No Dye Absolutely Fast to Light

Regarding the fastness of a dye, it should be remembered that there is no dye which is absolutely fast to light. In time, any dyeing when exposed to the combined influence of light and weather, will gradually weaken from the original shade as dyed. On the other hand, fastness is a relative term. One dye may be capable of resisting the combined influence of light and weather in comparison with another dye of the same shade, but not possessing the same properties, and this holds good for very many dyes of the level dyeing group.

It therefore becomes a matter of great importance for the dyer to make his selection of colors, paying due regard to the properties of the dyes selected, so that the rate at which the dyes are influenced by exposure shall be the same for each dye used in the combination employed by the dyer. An instance can be cited: In dyeing a green, the combination might be made of a yellow and a blue; if the yellow succumbs to the influence of light at a more rapid rate than the blue, in time the green as originally dyed will appear bluer than the sample. On the other hand, should the blue used in the combination fade out more rapidly than the yellow, the

YOU can't afford to use any but the finest Oil Soluble Colors

We Manufacture the Finest

OIL ORANGE
OIL RED
OIL BROWN
OIL YELLOW
OIL BLUE
OIL MAHOGANY

We Can Match Special Colors

SIZING SPECIALTIES CO.
INCORPORATED
JERSEY CITY NEW JERSEY

green may appear yellower than the sample. In this case the dyer should choose a blue and a yellow that are influenced equally.

The important problem at the present time is to recognize the fact that a considerable number of the dyestuffs formerly imported from Germany and belonging to that group of dyes most commonly employed for dyeing women's dress goods have been duplicated by the dyemakers of the United States. These American dyes possess the same solubility, level dyeing, permanency under the influence of exposure and light, and such other properties as the imported dyes possess. These dyes, when properly selected according to the combinations necessary for producing the shade required, will, in the hands of a dyer familiar with the class of goods to be dyed, produce results identical with those formerly obtained when the imported dyes were obtainable.

Should Meet All Demands

With the line of colors of domestic manufacture now available, the mills should have no difficulty in satisfactorily meeting every demand made upon their dye houses for the usual lines of shades that can be readily produced and which do not require for their compounding the blue and the violet now in process of development. There is no question but the textile mills working on women's dress goods are in a position to turn out cloth dyed with a very wide range of shades that meet most requirements as to fastness that were made in those same mills and dyed with colors formerly imported from Germany. There seems to be no justification for any demand for a more explicit warranty than what is stated in the foregoing. If tests are made of cloth dyed in American mills, manufactured during the years preceding 1914, the same lack of fastness to light is apparent in a great number and regarding which but little complaint, if any, was made.

Chrome Ore Imports Restricted

In pursuance of the general policy of tonnage conservation, the War Trade Board has introduced restrictions upon the importation of chrome ore and chromite from overseas. The sources of home supply are numerous, and are believed to be capable of extensive development. To provide for interim demands pending the further development of such deposits, imports from Cuba, Guatemala, Newfoundland and Brazil by sea will be permitted, not exceeding 43,500 tons up to March 31, 1919, and from New Caledonia up to 10,000 tons prior to December 31, 1918. Shipments overland or by lake from Canada, overland from Mexico, or as return cargo from European ports when coming from convenient ports and not involving delays in loading, will be permitted. All outstanding licenses for the import of chrome ore and chromite for overseas have been revoked as to shipments made after June 15, 1918.

United Chemical Products Corporation
Importers, Exporters and Manufacturers
YORK AND COLGATE STREETS, JERSEY CITY, N. J.
CHROME AND SULPHUR COLORS
ACID COLORS
BASIC COLORS
DIRECT COLORS
SUMAC EXTRACT
LOGWOOD-HEMATINE
GAMBIER-FUSTIC
CHROMONAL FAST KHAKI
CHROMONAL FAST GREEN
Fast to Light, Fulling and Milling
Soluble Oils, Textile Soaps, Gums, etc., for Weighting, Softening, Finishing and Waterproofing all Fabrics
WRITE FOR SAMPLES AND QUOTATIONS

TREATMENT OF BURNS FROM CAUSTIC SODA

By M. Firsinger*

SOLID caustic soda and caustic soda liquor of even moderate strength, especially if hot, attacks clothing quickly, and attacks the flesh. Caustic soda is especially active in contact with the delicate structures of the eye or the interior of the mouth. For these reasons it is necessary to avoid its contact with the skin, and to adopt means for immediate treatment in case contact occurs.

For immediate first-aid treatment of caustic soda burns, dilute acetic acid is used. It is prepared from good quality commercial acetic acid by diluting it to an exact content of 2 per cent. actual acetic acid. If the commercial acetic acid be of 30 per cent. strength, one quart of it is added to fourteen quarts of water to give 2 per cent. strength. After this solution the acid is analyzed, to make sure that its strength is 2 per cent.

When an employee receives a caustic burn, this dilute acetic acid is applied immediately. It instantly neutralizes the caustic soda and converts it into harmless sodium acetate, and the injurious action of caustic upon the flesh or clothing is stopped. With serious burns application of dilute acetic acid is immediately followed by carron oil, which has a soothing effect. In case of eye burns, the eye is thoroughly washed with acetic acid, and then sweet oil is applied.

It is important that no absorbent cotton be used for cleansing the burn, because fibres of the cotton become imbedded in the wound. They interfere with the healing and present danger of infection.

In order to identify the dilute acetic acid as a first-aid material, a small amount of cochineal solution is added to color it red. In general, the handling of soda ash or sodium bicarbonate present no accident risks, but caustic soda, either solid or liquid, must be guarded against. The best safeguard against all conditions of caustic soda burns is to have a supply of 2 per cent. acetic acid solution always at hand, in clean bottles, close to every place where caustic soda is handled.

With these precautions, and with workmen trained to use the acetic acid immediately, serious burns from caustic soda need rarely happen.

* From a paper read before the National Safety Convention, New York.

American Goods Wanted For Australian Market

Walter E. Bush, 109 Highland Ave., Jersey City, N. J., has recently been appointed United States buyer for one of the largest importing corporations in Australia.

If any of our readers are not now represented in that market and if your goods are manufactured by and your firm is composed of non-enemy aliens, it is possible that a certain amount of business might be secured for that field, which at this time is more than ever looking for goods of American manufacture, by corresponding with Mr. Bush.

The Western Dry Color Company, 608 West Fifty-second Street, Chicago, Ill., has awarded a contract for the construction of a new two-story addition to its plant, about 45x60 feet. Rawley Brothers, 810 West Sixty-third Street, Chicago, are the contractors.

The U. S. Color & Chemical Company, 15 Custom House Street, Boston, Mass., is having plans prepared for the construction of a new one-story addition to its plant at Ashland. The structure will be about 50 x 80 feet.

AMERICAN DYESTUFF REPORTER
Published weekly by
HEWITT PUBLISHING CORPORATION
470 Fourth Ave., New York

Pointed solely toward the welfare and growth of the American Dyestuff Industry. Unbiased contributions appreciated.

DEXTER W. HEWITT, President
A. P. HOWES, Vice-President
ELISHA HEWITT, Sec'y-Treas.

Domestic Subscription, $3 per year. Foreign, $4.
Advertising rates on request.

United States Leads in Exports

According to figures prepared by the National City Bank of New York, America now occupies first place among the export nations of the world. Prior to the war first place was held by Great Britain and second by Germany but since the suspension of Germany's export trade the United States has, until the present time, occupied second place to Great Britain. The last figures, however, placed us well in the lead.

Among the exports which are mentioned are those of dyes and dyestuffs, the total value of which for the fiscal year ending June 30, 1914 was $357,000; in 1915, $1,178,000; in 1916, $5,012,000, and for the calendar year, 1917, $16,107,000.

This tremendous growth in our dyestuff industry holds great promise for what may be expected when our infant industry acquires its full growth.

Color Importers Organize

Importers of colors and dyestuffs have formed an organization to protect their interests in tariff matters. Walter F. Sykes, of Walter F. Sykes & Co., of this city, president of the association, declined to discuss the matter further than to admit that such an association had been formed.

It is understood that the organization will take in many of the largest color and dyestuff importing houses in the United States. The chief purpose of the association, it is said, is for the protection of the importers at the close of the war in view of the present agitation for further increases in the tariff rates on dyes and the plans of the American manufacturers to hold on to the new business they have obtained.

Among the firms reported as interested in the organization are; A. Klipstein & Co., Walter F. Sykes & Co., Geigy & Co., of New York City; Arteaux & Co., of Boston, and Fortner & Co., of Philadelphia.

The name of the organization is United States Dyestuff and Chemical Association. Officers elected are Walter F. Sykes, president; P. R. MacKinney, New York Color and Chemical Co., N. G. Wattes, of Andrey Kovicz & Dunk, Philadelphia, and E. C. Klipstein, New York, vice-presidents. W. F. Zipse, Geigy Company, New York, secretary.

Amendments to Dyestuff Tariff

The Tariff Commission has sent to the House, a report on the investigation recently made into the dyestuff situation and suggested several amendments to the law. A bill will be introduced at this session covering the chief points suggested by the Commission. One suggestion deals with concentrated dyes and if adopted will prevent the importation of products which are stronger than the commercial standard and which heretofore have escaped paying duty in proportion to the value. Dyes were imported from Germany before the war in this concentrated form and then diluted for commercial use. Other paragraphs in the law have been clarified and manufacturers believe the changes will prove of benefit to the industry after the war.

Du Ponts Take Over Plant at Lodi

It is reported that the United Piece Dye Works, of Lodi, N. J., has decided to discontinue the manufacture of dyestuffs, and that E. I. Du Pont de Nemours & Co., of Wilmington, Del., will take over that branch of the business. The making of dyes was undertaken by Albert Blum and Henry Blum, owners of the United Piece Dye Works, when the war cut off their supplies. They made many of the most expensive and rare dyes.

ALIZARINE RED NOW MADE IN AMERICA

IN January of this year, the National Aniline & Chemical Company, Inc., made this statement in its house organ "Dyestuffs": "The interesting things hoped for in 1918 are the placing on the market of alizarine red, of indigo, and of hydron blue. The consuming trade looks forward with expectancy to these accomplishments. Other things are hoped for, but these are promised." The development of synthetic indigo has already been announced both by the Du Ponts and the National Aniline Co. At the recent textile show in Grand Central Palace the National Company displayed two large globes, one filled with indigo and the other with alizarine. It now announces that alizarine is actually being placed in the hands of the consumers, the first shipments having already gone out.

Up until the beginning of the war the big alizarine industry was almost entirely German. It was in 1868 that two German chemists, Graebe and Lieberman, determined the constitution of the product and succeeded in manufacturing not only alizarine but also purpurine. Upon this investigation also depended a number of subsidiary processes of great importance: the manufacturing of bichromates and fuming sulphuric acid. The discovery of alizarine practically eliminated the entire madder industry, which flourished especially in France, and many hundreds of thousands of acres which had formerly served for the cultivation of madder were made available for foodstuffs. Madder has almost completely disappeared from the markets because it could no longer compete with alizarine in purity, strength, and especially uniformity in quality. There are still some dye houses in Europe which from force of habit prefer madder to alizarine, but it is universally conceded that, especially for the calico printer, alizarine produces results which were not possible with madder.

Alizarine, so named by Robiquet and Colin after "Alizari" the commercial name of levantine madder root, is a derivative of anthracene, which is contained in coal-tar. Anthracene is usually oxidized with sodium bichromate and sulphuric acid, and the resulting anthraquinone transformed into a sulphonic acid. The sulphonic acid is then melted with caustic soda and transformed into alizarine in closed vessels under pressure. The chemical name of Alizarine is dioxyanthraquinone. It is a reddish yellow powder in its pure state, or appears in brilliant orange red needles at the melting point of 289-290°. It is practically insoluble in cold and very little soluble in boiling water. It dis-

FRED WETZEL & CO. N.Y.

METHYL VIOLET
METHYLENE BLUE
FUCHSINE CRYSTALS
ZOBEL
Manufactured by
ZOBEL COLOR WORKS
SALES OFFICE: 38 Water St., New York FACTORY: Brooklyn, N.Y.

solves completely with a reddish orange color in boiling alcohol, ether, and carbon disulphide, glycerine, glacial acetic acid, benzol, and tupentine. Caustic soda dissolves it with a bluish violet shade. Muriatic acid precipitates the dyestuff from this solution.

Dyeings produced from alizarine are distinguished by great brilliancy and excellent fastness to light and washing. When applied to cotton in connection with aluminun mordants, the so called Turkey Red, the fastest red known to the art of dyeing, is produced. It is for this Turkey Red that alizarine has been needed most.

The alizarine of the National Aniline & Chemical Company, Inc., has been developed in the laboratory of its Brooklyn Works, where, we are told, it is now being manufactured in a building erected for this purpose. This achievement, with that of indigo, does much to show the falsity in the position of those consumers who still doubt the ability of the American chemist and manufacturer to equal the product of the German, and to continue to supply the American consumer after the war. This American alizarine is, we understand, of exactly the same quality in all respects as that formerly imported from Germany. It is now expected that the development of hydron blue, a fast blue for cotton, which is likely to follow, will meet the last objections of the remaining doubters.

ATLAS COLOR WORKS
INC.
BROOKLYN, N. Y.

Manufacturers of
Indigotine
Indigo Paste
Indigo Extract
Alizarine Yellow 3G
Malachite Green

We do not job in any colors, we manufacture

SALES OFFICE:
322 Ninth Street, Brooklyn, N. Y.
WORKS:
Hamilton Ave. and Gowanus Canal
Brooklyn, N. Y.

Olney Chemical Alumnae Outing

The tenth annual outing of the Olney Chemical Alumnae of the Lowell Textile School, Evening Course, was held at Johnny Cake Inn, Billerica, Mass., June 8, 1918.

During the afternoon field sports were indulged in and in the evening dinner was served. Following the dinner many interesting speeches were delivered.

Following are the officers for the coming year:—Samuel J. Nichol, President; Jas. H. Spurr, Vice-President; Alex. T. Herron, Secretary and Treasurer.

Dunker & Perkins, Boston, Mass., dealers in dyestuffs and soaps, have incorporated under the laws of Massachusetts, and will continue the business under the firm name of Dunker & Perkins Company, with Charles H. Dunker as President; Frank Watson as Vice-President, and Eugene C. Perkins as Treasurer. The new firm will handle in New England the products of Federal Dyestuff & Chemical Corp., Kingsport, Tenn.; Imperial Color Works, Glens Falls, N. Y.; Imperial Dyewood Co., Glens Falls, N. Y.; Herrick & Voigt, New York, N. Y.; Fisk Manufacturing Co., Springfield, Mass.

FRED WETZEL & CO. N.Y.

The Uncolored Story of American Dyes

By John Walker Harrington

Editor's Note: *The following article appeared recently in the Evening Post Magazine—While in no sense technical it gives a very fair idea of what American Manufacturers have accomplished and the remarks in regard to dye testing should prove decidedly interesting to readers of the* Reporter.

THE uncolored story of American dyes has about 250 shades, as compared with the 900 of the German chemical saga. The most convincing presentation of what American manufacturers of dyestuffs have accomplished since August, 1914 was given in the Sixth National Textile Exhibition, which was held recently at the Grand Central Palace. Not all of the 130 dye-makers of the United States were represented in the booths and stalls, but there were enough of them to show that the industry has made gigantic strides. Any trade would indeed require seven-league boots to overtake in forty months what it took Germany forty years to develop.

The first thing which the Teutonic manufacturers of the aniline colors did was to emulate the humble squid and to darken the waters of competition with the inky blackness of propaganda. They declared by indirection and also by good set terms that no dyes could really have color or enduring qualities unless they came from factories beyond the Rhine. The German dye industry is built up, or rather was before it went into munitions, upon a series of interlocking directorates. The seven leading companies co-operated in such a way by an exchange of by-products and residues that they could crowd most manufacturers out of a place in the sun.

As a matter of fact, the dyes which are being made in this country are, taking a general average, just as good for the specific purposes for which they were intended as any colors ever dumped from a German submarine. Much of the dissatisfaction registered on the faces of American womankind concerning our native dyes has not been due to the products themselves, but to the fact that the dyes are often applied to uses for which they were not intended. A vigorous complaint, made only a few months ago, concerning some goods which had faded was well justified, because, although the color used had the distinction of being brought here on the underseas freighter *Deutschland,* it was never intended for silk, but for wool. The manufacturer, in order to save money on the cost of the fabric, had employed a cheap dye, which proved unsatisfactory, despite its highborn German pedigree.

The American dyestuff industry has come up out of great tribulation. Before the beginning of the European war the making of dyestuffs in this country consisted largely of finishing off partly completed products of Germany and Switzerland. The material, coal tar, which is the mother of so many hundreds of aniline dyes, was conserved in Europe and thrown away in the United States. In these days it seems like a bad dream that America was once sunk in such economic sin that she squandered all the volatile constituents of coal in the manufacture of coke. She was burning down houses in order to roast her pigs. The demand for coal tar brought about by the war caused the United States to tear down the old type beehive ovens and to substitute for them the by-product ovens which conserved the black liquids in which are concealed the most potent means for promoting "battle, murder, and sudden death."

The Coal-Tar "Family Tree"

FROM the dark and viscid coal-tar are derived what the industrial chemists call the "primary crudes," such as benzol, toluol, xyol, naphthalene, and anthracene. From these main

branches of the family tree of coal-tar sprout many scions. They in turn have their various twigs, known as the intermediates, which rejoice in unpronounceable and sesquipedalian titles. From the intermediate twigs bloom strange flowers and flourish parti-colored leaves. By the wizardry of modern chemistry all the colors of the spectrum may be derived from any one of these primary branches of the tree. The dyes, however, differ in quality and adaptability. The manufacturer would like to develop the toluol branch as much as possible, but toluol is the main ingredient of the powerful war explosive, trinitrotoluol, called for short T. N. T. The Government needs all the T. N. T. it can get these days, and as the product which formerly sold at thirty-two cents a gallon is now quoted from $4.50 to $5 a gallon, the American dye manufacturer cannot plunge very heavily in the direction of toluol. He therefore does the best he can with the next branch, benzol, which is much cheaper, and more available.

The hundreds of dyes which spring from the coal-tar trunk vary in quality and properties. Some are good for coloring wool and others are suited for silk or cotton. Sometimes manufacturers of textiles have been so pressed for time and material that they are not able to maintain all these fine distinctions. As, however, a dye is a chemical, and its formula is identical no matter where it is produced, there is really no difference between a German dye and an American dye, any more than there is any variation of Syracuse salt from the salt of Silesia.

One of the most interesting displays at the Textile Exhibition was a series of samples of cloth, half of which were dyed with anilines made in Buffalo, N. Y., and the remainder with dyes made in Germany. The fabrics had both been exposed to air and light and weather under the same conditions. The manufacturers who studied them with most critical eyes and with a view to using them in their own color vats could see no appreciable difference in most cases. In some instances the American product met the tests better than the one of

DYESTUFFS

AND

CHEMICALS

H. A. METZ & CO., Inc.

122 HUDSON STREET NEW YORK

Teutonic manufacture. It is true that here the whole range of the spectrum could not be found, and yet there were scores of good practical shades to be obtained. There were even some very bright and alluring tints, such as Niagara blue and Erie green. In long rows of glazed porcelain pots kept hot on a steam table were solutions of dyestuffs in which a laboratory assistant was constantly dipping skeins of yarn. There the German and the American pigments were side by side, and there was no question that the product of the United States excelled that of Germany, in the red division.

There could be seen in the cream-colored beakers solutions of brilliant scarlet, the reddish allurement, azo rubine; crimson, fuchsine, croceine, scarlet, xylidine scarlet, and cloth red. On parade were various shades of orange denominated croceine and crystal, the yellow of metanil and resorcine, a fast blue, an induline of deep cerulean tinge, and a cynanone of the hue of an Egyptian night.

Among the acid colors put on view were resorcine browns, fast violets, and half a score of blacks. Dyes of this groups are used primarily for wool, and are employed in an acidified bath. Some of them are utilized for many other purposes, such as wood staining, the tinting of paper, and especially in the manufacture of carpets and rugs. Many are available for the finest kind of silk dyeing.

Delicate Shades Lacking

IT was not so long ago that the manufacturers of floor textiles hoisted a signal of distress because they could not get enough dyes to keep their mills busy. One large corporation which employs several thousand men in its Yonkers plant had by remarkable foresight accumulated a year's supply of German dyes before the beginning of the European war. In days like these, however, the carpet and rug manufacturers can obtain any shade they need for their vats.

The members of the group of direct colors used principally for dyeing unmordanted cotton are especially represented. Some of this division have the valuable property of imparting fast color to both wool and cotton, and therefore they are of great importance for dyeing fabrics in which both of these fibres are combined. In this class were seen garnet reds, chloramine yellows, and widely varying shades of green, blue, violet, and brown.

In the dyeing of clothes for men all the principal difficulties have been overcome. The khaki and the olive drab of the army uniforms, the browns and grays and tans employed in the cloth used for civilian garb, are now to be had in abundance. It is true that the business suits of men disport much less those threads of bright, light blues

FRED WETZEL & CO. N.Y.

Frank Hemingway, Inc.

115 Broadway, New York

Sole Distributors

VICTORIA BLUE B
VICTORIA BLUE BASE
CRYSTAL VIOLET
CHROME BROWN
DINITROBENZOL
BENZYL CHLORIDE
SALICYLIC ACID
PICRAMIC ACID
ORTHONITROPHENOL
PARANITROPHENOL
BENZIDINE SULPHATE
and BASE

Manufactured by

The Butterworth Judson Corp.

WORKS

Newark, N. J. Baltimore, Md.
Boston, Mass.

and greens and violets which were formerly used to lighten the more sombre effects.

The greatest difficulty which the dye manufacturer has had to face is the production of just these light and attractive hues of violet, blue, and green, for, by reason of some contrariety innate in the eternal feminine, women want these shades at this season. They simply must have their Copenhagen blue, reseda green, their Irish emeralds, wistaria, and all manner of pale violet tones, as well as the more startling ones. Many women are wearing dark blues, which may be had in abundance, but they are not happy in them. The manufacturer is producing the various alizarine colors in fair quantities, but he has not yet been able to reach the limit of the demand for horizon blue, nor can he furnish as much as he would of the rosy glow of the dawn of a perfect day. He has, however, been doing his full duty by Kelly green, although he has to charge nine dollars a pound for it instead of sixty-five cents a pound, which was the price before the war.

Occasionally, women customers complain that their silks of light and brilliant colors are fading or that the colors run. This is not necessarily the fault of the dye-maker. Even before the war there were colors which could not be guaranteed not to crock or fade. The American color makers have been especially successful in the production of fast blacks for hosiery, which they are placing on the market at prices within the reach of all.

"The black dyes used in this country for the coloring of hosiery," said Dr. Matos, in charge of the exhibit of the National Aniline Chemical Company, Inc., at the textile show, "are as good as may be found anywhere else in the world. We must remember, however, that before the war we were wearing large quantities of imported socks and stockings in this country. The dyeing of black hosiery is a more or less complicated art, as the color is made in the fibre during the process of manufacture, and particles of the unattached dye must be removed. Orders for black socks and stockings were cascaded upon the mills, and the hosiery manufacturers found difficulty at first in getting out their product. Dyers were teased and harassed and worried to hurry up at all stages of the process. In those days the skimping of time in finishing up the product resulted in the making of hosiery from which the color would come out in washing or crock off on the feet. All the good quality black lisle or cotton hosiery is dyed with aniline, and we can challenge the world on the quality of this product.

Testing Dyes

THE shortage of certain grades of material from which fabrics are made has made variations in color, irrespective of the dyestuffs employed. It is difficult, for instance, to get certain grades of long-fibred wools, and even in the making of cloth for military uniforms the Government permits the use of a limited amount of shoddy. Shoddy, being composed of very short fibres of wool obtained by the picking

AMERICAN MANUFACTURERS

ALKALI BLUE SAFRANINE FUCHSINE MALACHITE GREEN
SOLUBLE BLUE METHYLENE BLUE METHYL VIOLET
as well as other ANILINE COLORS

DICKS, DAVID COMPANY, Inc.
299 BROADWAY NEW YORK

Works: Rose Bank, S. I., N. Y., Chicago Heights, Ill. *Agents:* Reliance Aniline & Chemical Co
Offices: Chicago, Ill., Paterson, N. J., San Francisco, Cal., Greensboro, N. C., Glens Falls, N. Y., Boston, Mass.
Members: American Dyestuff Manufacturers Association, American Dyes Institute.

to pieces of old woollen clothing or wool rags, has filaments from three-quarters to an inch in length. The weaving of it into any fabric detracts from the finish and durability, and also affects the uniformity of color.

The remarkable progress made in the manufacture of dyestuffs in the last two or three years has developed the methods for the testing of the substances used in coloring the textiles. There are now many laboratories which are devoted to solving the problems of the dyer and checking up his work. The examination of the effects of this coloring matter upon the fabric is becoming more and more of an exact science. The fabrics are scrutinized under ultra-violet rays and under daylight lamps. Also, they are subjected to the microscope so that, if crystals of the chemicals are detected clinging to the threads, a fault in the dyeing process may be corrected. The colored fabrics are dipped in dilute acids or in alkali solutions so that their fastness may be determined. The strength of dyes is accurately measured in an apparatus known as a colorimeter, in which solutions of the dye placed between the observer and the light are studied through an eyepiece. Before a manufacturer colors thousands of yards of a valuable fabric, he must know precisely whether the dye to be used will match that which had been employed on other goods. No matter how much confidence he may have in the skill of the master dyer, he insists also upon having the shade checked up by the scientists.

"American dye manufacture," said Dr. Edward Wallace Pierce, chief chemist of the United States Conditioning and Testing Company, "has made great progress. It is handicapped somewhat by the fact that American capital demands quick returns on its investments. The Germans in building up their enormous dye industry were very thorough and very patient. They expended millions of dollars, for instance, in the experiments which resulted in the making of synthetic or artificial indigo from coal-tar. The originator of the process worked eighteen years before he produced the substitute for the natural plant. When the capitalists interested told him that he ought to make it from a more abundant base than toluol in order to have it a commercial success, he went back to the laboratory for ten years more, and finally produced the substance from naphthaline.

"There is no difficulty in producing dyestuffs of purity and strength in small quantities under laboratory conditions. When, however, thousands of tons of material must be handled at once, numerous complications arise. Impurities appear in the product. Methods must be devised for removing them. A large New York company with which I was formerly connected spent $90,000 before it produced 1,000 pounds of a certain dye which fulfilled all the requirements of large-scale manufacture. The various reactions in the factories require certain lengths of time. For example, it is thirty-three days from coal-tar to the H acid which is used as a basis for many of our important colors. American makers have abundant scientific knowledge, and they are rapidly acquiring practical experience. There are several important discoveries almost ready for announcement which will show they have developed originality and initiative in methods."

Those who are intimately connected with the secrets of the native dye industry believe that within the next ten years it will be a tremendous factor, not only in this country, but in the world.

The National Aniline & Chemical Co., Buffalo, N. Y., will construct a three-story brick and steel machine shop to cost $85,000. This building will use 100 tons of structural steel. The same company soon will ask for bids on an eight-story warehouse.

FRED WETZEL & CO. N.Y.

NATIONAL ANILINE COMPANY OPENS NEW BUILDING

THE National Aniline & Chemical Co., Inc., formally opened their new building at 21 Burling Slip, New York, on the afternoon of Tuesday, June 18th. On behalf of the board of directors invitations to inspect the building at that time were sent to the various friends of the Company throughout the dyestuff and allied industries. Those who embraced this opportunity were conducted through what is undoubtedly the handsomest and most complete building devoted to the commercial side of the dyestuff industry in America.

The building itself is ten stories in height and is occupied exclusively by various departments of the National Aniline & Chemical Co. There is in all a total of 25,000 square feet of available store space. The first two floors are occupied by the bookkeeping and accounting departments: on the third floor are located the offices of the managers of the drug, gum and essential oils departments: the fourth floor is given over to the export, statistics and insurance departments; on the fifth floor are the offices of both the domestic and export sales departments: the sixth floor is occupied by the correspondence department: and on the seventh floor are the department of publicity, filing rooms and the library. In connection with the latter it might be said that there is here collected one of the most complete libraries of works pertaining to the dyestuff industry which is available in America to-day; in addition to numberless volumes on different phases of the industry in both English and foreign languages there are also complete files of various technical journals, all of which are accessible to the general public for reference reading. The eighth floor is given over to the purchasing department and the Board room: on the ninth floor are the executive offices; while the tenth floor is taken up by an exceptionally well equipped laboratory where all colors are tested under the supervision of the technical director before delivery, even though they may have been previously tested at the laboratories of the various plants.

After being permitted to inspect the building the guests were entertained on the roof, where light refreshments were served and whence a remarkably fine view of the harbor and lower city could be had.

Among the more prominent of the guests present were: Jerome A. King, of J. B. King & Co.; W. D. Wood ,of the Corn Products Refining Co.; H. L. Griggs, of the Bank of New York; W. H. Childs, W. N. McIlravy and T. M. Rianhardt, of the Barrett Co.; Wm. J. Matheson (President of the National Aniline & Chemical Co., Inc.); Jas. L. Morgan, Lancaster Morgan, Wm. H. Nichols, W. H. Nichols, Jr., W. C. Nichols, Chas. R. Smith, Sanford H. Steele, Henry Wigglesworth, of the General Chemical Co.; Frank L. Sniffen, of the Title Guaranty & Trust Co.; John H. Peters, of the National Lead Co.; and Geo. N. Bessett, of Burlington, Vt.

United States Conditioning & Testing Co.

NEW YORK 340 Hudson St. | **PHILADELPHIA** 205 Chestnut St. | **PATERSON** 220 Ellison St

General Textile Testing

Dyestuff and Color Tests

Microscopic examinations **Photomicrographs**

DYER'S RIGHT TO LIEN

IN the recent case of L. Hecht & Co. vs. Valkone Dye and Finishing Works, 66 Pennsylvania Superior Court Reports, 97, the plaintiff was sustained in a suit to replevy certain materials held by the defendant under a lien claim.

The plaintiff was in the habit of sending raw yarn to a company in Providence to be manufactured into woolen goods and then sent to a dyeing and finishing company for the plaintiff. Certain materials were sent to the defendant by the Providence company under this agreement. That company being indebted to the defendant the latter refused to perform the work or to surrender the goods until paid an amount due from the former for work previously done under a general agreement that all goods received by the defendant should be subject to lien for any balance due from the Providence company for other work. Finding that the plaintiff was not charged with knowledge that a general lien agreement existed between the Providence company and the defendant, the court decided that no lien could be enforced as against the plaintiff, the owner of the goods. The court said:

"There seems to be no doubt that a general lien for work done on previous goods sent by the owner will be sustained in law against goods subsequently sent by the owner, though no work had been done on these goods: Firth & Foster Bros. v. Hammill, 167 Pa. 382. In that case the transaction was between the immediate parties. In the case at bar a third party intervenes, who received the goods from the owner, and transmits them to the company claiming the lien. To subject the owner's property to this lien, there should be such action on his part as would show assent, or through the equities of the case stop him from denying the workman's right of lien."—*National Cleaner & Dyer.*

Meth-o-lene Plant for Sale

The Meth-o-lene Company has discontinued the manufacture of Aniline Colors, due to the impossibility of procuring certain raw materials which they require. The Company, however, is taking care of its customers through their Agents, Binney & Smith Co.

It is understood that their large and well equipped factory located near Easton, Penn., is now for sale. It is not likely that they will resume the manufacture of Aniline Colors unless the chemical market shows a radical change. It is possible that the plant will be re-equipped to produce some other product.

Swiss Profits in Dyestuffs

The Sandoz Chemical Works Company, Basle, which is among the leading Swiss manufacturers of coal tar colors, is paying a dividend of 25 per cent. and a bonus of 100 per cent. The Society for Chemical Industry, Basle, the largest of the Swiss dyestuff firms, for whom A. Klipstein & Co. are American agents, shows a net profit of £409,000 for the half year, as against £504,000 for the previous year, and is paying a dividend of 12½ per cent. as against 25 per cent. and a bonus of 25 per cent. last year, and is also giving the shareholders one new share for every four shares now held. Before the war the average profit was about £200,000 and the dividend 16 per cent.

FRED WETZEL & CO. N.Y.

CLEARING HOUSE
FOR
COLORS

SPECIALTY:
Brilliant Fast Sky Blues

DYE EXCHANGE CORPORATION
141 BROADWAY NEW YORK

Bring Us Your Dyestuff Problems

The application of dyestuffs to textiles is as important as their production. The technique of this branch of the color industry has for years commanded the best talent among those dyestuff distributors who have catered to the highest class of trade.

An intimate knowledge of the possibilities of every dyestuff is often necessary to meet the particular requirements of the consumer. Dyeing is a chemical, not a mechanical process, and the variation of local conditions, due to differences in quality of water, steam and chemicals, makes the dyehouse problem an individual one.

Such problems are welcomed by the technical department of this company, which is manned by chemists who have been picked because of their knowledge, practical experience and demonstrated ability. We have long maintained well-equipped laboratories at our different offices for this purpose, and invite inquiries and extend, without any obligation on the part of our customers, our services to all who stand in need of them.

National Aniline & Chemical Company

INCORPORATED

21 Burling Slip, New York